U.S. EPA's PCB Regulatory Program – Overview

ECOS Cross-Media Committee Meeting
Panel Discussion on PCBs in Products
August 28, 2012

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Legislative Framework: Toxic Substances Control Act (TSCA) Section 6(e)

- Specific to PCBs: Controls the manufacturing, processing, distribution-in-commerce, use, marking and disposal of PCBs
- Bans manufacturing and processing, unless exempted by rule:
  - Exempted Manufacturing Processes (EMPs)
  - Exempted PCB Products (EPPs)
- Bans distribution, except for totally enclosed and authorized PCBs
  - Distribution of intact, non-leaking electrical equipment is totally enclosed
- Bans use/storage, unless authorized by rule:
  - Use/storage authorized ≥ 50 ppm for certain electrical equipment and other uses (e.g., carbonless copy paper; research and development; natural gas pipelines; porous surfaces contaminated by spills; decontaminated materials)
  - Recycling paper and asphalt shingles
- Disposal – PCBs ≥ 50 ppm and remediation (cleanup) wastes, options include:
  - TSCA-permitted incinerator; high-efficiency boilers (liquids < 500 ppm); TSCA-permitted landfills (solids); permitted alternative destruction technologies; scrap metal recovery ovens (metals <500 ppm); decontamination; risk-based disposal

Regulatory Exemptions

- General exclusions of some <50 ppm PCBs; promulgated via rulemaking (at least 5 rules), each with public notice-and-comment opportunity
- Manufacturing exemptions: Subpart E and *excluded manufacturing processes* at §761.20
  - *Inadvertently generated PCBs, annual average <25 ppm; 50 ppm max*
  - *Notification to EPA if >2 ppm*
    - *Approximately 72 notices from 28 companies on file*
- Use exemptions: No authorization is needed to use *excluded PCB products*, *products of an excluded manufacturing process*, recycled PCBs, or sewage sludge
- Processing and distribution in commerce allowed for: *Excluded PCB products*, recycled PCBs

PCBs 1970s-2000s: Removed & Currently in Use

- EPA has promulgated more than 25 TSCA PCB rules since 1976
- Resulted in millions of pounds of liquid PCBs safely removed from use (approximately 1.5 billion pounds produced from 1929-1970s)
- Millions of pounds of liquid PCBs estimated to remain in use in equipment 30+ years old
  - Generally at very high concentrations (e.g., 500,000 ppm or greater)
  - Are well known to include “dioxin-like” congeners
- Emerging issues with non-liquid PCBs (e.g., caulk and paint) in use
  - Also at very high concentrations (e.g., caulk up to 30% PCBs = 300,000 ppm)
  - Are well known to include “dioxin-like” congeners

2010 Advance Notice of Proposed Rulemaking: Reassessment of PCB Use Authorizations

- ANPR solicited comments and data needed to characterize/understand ongoing sources and releases of PCBs:
  - Liquid PCBs in equipment and pipelines
  - Elimination of most use authorizations at levels ≥ 50 ppm
  - Non-liquid PCBs (including caulk)
  - Porous surfaces with PCBs
  - Definitional and marking issues
  - Use of 50 ppm level for excluded products
  - Lowering the Level of Quantitation (LOQ) from 2 ppm to 1 ppm

Comments on the ANPR

- 242 comments in docket; about 148 individual commenters
- Major groups of commenters
  - Electrical utilities (industry)
  - Natural gas transmitters and distributors (e.g., INGAA, AGA)
  - Parents and workers in New York City schools (caulk)
  - Governments (DOE, Mass. DEP, Washington State DEP)
  - Recycled paper producers (Inland Paper)
  - Pigment Manufacturers (Color & Pigment Manufacturers Ass'n)
  - Metal/plastic recyclers (e.g., ISRI, MBA Polymers)

Excluded Manufacturing Process/Products: Comments

- Washington State Department of Ecology
  - Significant amounts of PCBs flow into Puget Sound; primary source is runoff; " . . . do not have estimate for which sources of PCBs are contributing most to loading"
  - Does not "recommend that the EPA authorize the use of caulk, paint, or other non-liquid PCB product at concentrations exceeding the level of 50 ppm currently provided . . . for excluded PCB products"
- California Regional Water Quality Board
  - "In development of this TMDL, we learned that PCBs releases from uncontained spills and outdated products are the largest ongoing sources of PCBs in our waterways" (e.g., caulk, paint, other building materials)
  - Consider water quality impacts when reducing the exclusion concentration for PCBs
- Confederated Tribes of the Umatilla Indian Reservations (CTUIR)
  - "CTUIR DNR supports the elimination of PCBs from all dyes, pigments and inks"
  - Overseas manufacturers send products to U.S. and U.S. companies must clean up contamination to meet water quality standards

Excluded Manufacturing Process/Products: Comments

- Inland Paper/Spokane Riverkeeper/The Lands Council
  - Eliminate all federal exclusions or exceptions for inadvertently formed PCB's as a byproduct or impurity in chemical manufacturing processes
  - Monochloro-biphenyls and Dichloro-biphenyls should be excluded from total PCB regulation due to lower potential for bioaccumulation and human health toxicity
- Northwest Pulp and Paper Association (NWPPA)
  - NWPPA supports lowering the allowable concentration of PCBs in dyes, inks and pigments products as much as possible, using a phased approach, as the best mechanism for reducing PCB contamination in recycled furnish
  - Such action must be coordinated and connected federal and state actions involved in developing water quality criteria and implementation
- American Forest and Paper Association (AF&PA)
  - Carbonless copy paper manufactured in the U.S. no longer contains PCBs; AF&PA encourages EPA to discontinue use authorization for PCBs in manufactured/imported carbonless copy paper
  - PCBs in azo and phthalocyanine pigments should be banned from U.S. commerce, including imported products and packaging

Excluded Manufacturing Process/Products: Comments

- Color Pigment Manufacturers Association (CPMA)
  - 1 ppm threshold would eliminate three important pigment groups from commerce, affecting color printing as well as colors in paint and plastics
  - Technology does not now exist to eliminate PCBs in all organic pigments to a level below 1 ppm
  - Would put U.S. pigment and product manufacturers at additional competitive disadvantage versus pigment and product importers
- Representative Mike Simpson (Idaho) letter to EPA (outside ANPRM process)
  - EPA regulations inequitably allow overseas manufacturers to export PCB containing products into the U.S. with concentrations up to 50 ppm, while then subjecting our own businesses and communities to surface water quality standards that are nearly 8 million times more stringent
  - Manufacturing alternatives for similar dyes and pigments that do not contain PCBs are available

Potential Approaches

- TSCA – Regulatory: authorization or exemption changes require notice-and-comment rulemaking; must consider economic impacts under TSCA
- CWA – Regulatory – Water Quality Standards, NPDES Permitting and TMDL programs include a number of approaches/flexibilities for addressing site-specific issues (e.g., Variances, UAAs, etc.)
- Voluntary/Non-Regulatory
  - Design for the Environment – Alternatives Assessment Partnerships bring together a variety of stakeholders to evaluate the environmental and health impacts of potential alternatives to problematic chemicals.
  - Green Chemistry Program – recognizes and supports chemical technologies that reduce or eliminate the use or generation of hazardous substances during the design, manufacture, and use of chemical products and processes